REMARKS

The present application was filed on November 26, 2003 with claims 1-18. In a previous response, claims 5 and 15 were canceled. Claim 19 has been added. Claims 1 and 16-18 are the pending independent claims.

In the outstanding Office Action dated November 13, 2008, the Examiner rejected claims 1-4, 6-11, and 16-19 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,309,359 (hereinafter "Katz") in view of U.S. Patent No. 6,697,799 (hereinafter "Neal").

In addition, the Examiner rejected claims 12-14 under 35 U.S.C. § 103(a) as being unpatentable over Katz in view of Neal, and further in view of Handschuh et al., "S-CREAM – Semi-Automatic Creation of Metadata" (hereinafter "Handschuh").

As a preliminary matter, the undersigned acknowledges with gratitude the courtesies extended by the Examiner during a telephone interview on February 9, 2009.

With regard to the Examiner's § 103 rejections, Applicants initially note that an analysis supporting a rejection under 35 U.S.C. § 103 should be explicit and should not be based on mere conclusory statements. See KSR v. Teleflex, 127 S.Ct. 1727, 1741, 82 U.S.P.Q.2d 1385, 1396 (U.S., April 30, 2007), quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.").

With regard to the Examiner's § 103 rejection of claims 1-4, 6-11, and 16-19 in view of Katz and Neal, Applicants note that the cited references fail to teach the recited limitations. Specifically, Katz and Neal fail to teach the limitations of independent claims 1 and 16-18.

Claim 1 recites a method of determining an annotation for a document, the method comprising the steps of: obtaining an annotation proposed by a user to be associated with the document; automatically determining, in accordance with a knowledge base containing allowed annotations, whether the user-proposed annotation matches one or more allowed annotations from the knowledge base; and annotating the document with an allowed annotation from the knowledge base when the user-proposed annotation matches the allowed annotation from the knowledge base;

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wherein the user need not consider any annotations when a single allowed annotation is automatically determined to match the user-proposed annotation, and when more than a single annotation is automatically determined to match the user-proposed annotation: (a) in a first mode, the user need only consider the matching allowed annotations and select one of the matching allowed annotations; and (b) in a second mode, the user need not consider any annotations but rather one of the allowed annotations is automatically selected.

The Examiner argues at p. 3, sec. 7 of the Office Action that Katz teaches the limitations of claim 1 at Katz, col. 2, ll. 42-45; col. 2, ll. 54-55; and col. 3, ll. 3-7. Applicants disagree. At col. 2, ll. 42-45, Katz recites, "The basic feature of the invention is that selected subdivisions of the text, such as sentences, paragraphs, sections, chapters, articles, columns, or the like, are annotated, preferably with natural language questions, assertions, or noun phrases." Next, Katz at col. 2, ll. 54-55 discloses that "[t]he annotations may be generated manually, semiautomatically or automatically." Further, Katz at col. 3, ll. 3-12 recites, "In another method for the semiautomatic generation of annotations, a database of annotation groups is formed from existing annotated subdivisions. One annotation for a current text is then selected, either by an operator or by some automatic technique, and the database of annotations is then searched for a similar annotation. Other annotations in the annotation group containing a similar annotation to the selected one are then either used or proposed to annotate the current text subdivision." Applicants respectfully submit that the cited portions of Katz do not teach the recited steps of: obtaining an annotation proposed by a user to be associated with the document; automatically determining, in accordance with a knowledge base containing allowed annotations, whether the user-proposed annotation matches one or more allowed annotations from the knowledge base; and annotating the document with an allowed annotation from the knowledge base when the user-proposed annotation matches the allowed annotation from the knowledge base.

First, the cited portions of Katz do not teach obtaining an annotation proposed by a user to be associated with the document. Katz discloses that "a database of annotation groups is formed from existing annotated subdivisions." Katz, col. 3, ll. 3-12. Further, Katz discloses that "[o]ne annotation for a current text is then selected, either by an operator or by some automatic technique,

and the database of annotations is then searched for a similar annotation." <u>Id</u>. Applicants note that an <u>annotation selected</u> for current text is not the same as an <u>annotation proposed</u> by a user to be associated with the document as recited in the claims and supported in the specification. <u>See</u> Specification, p. 5, ll. 7-22. Selecting an annotation implies that a given annotation is selected from predefined annotations. For example, it appears that Katz discloses a database of annotations in which an annotation is selected. This is different than a user proposing an annotation. Therefore, Katz does not teach obtaining an annotation <u>proposed</u> by a user to be associated with the document.

It follows that Katz does not teach "automatically determining, in accordance with a knowledge base containing allowed annotations, whether the user-proposed annotation matches one or more allowed annotations from the knowledge base" as recited in the claims. Applicants assert that Katz does not teach a knowledge base containing <u>allowed annotations</u>. The concept of allowed annotations may be found in the specification at, for example, p. 1, ll. 9-14 ("Numerous applications require the annotation of documents with a fixed set of terms."). It should be noted that Katz simply proposes annotations for selected text. Further, Katz discloses how to quickly locate all text related to a given annotation. <u>See</u> Katz, col. 3, ll. 13-16 ("One or more pointers may be stored with each stored annotation so that, during a search, when an annotation is located, all text relevant to that annotation may be quickly located."). This mechanism does not teach automatically determining whether the <u>user-proposed annotation</u> matches one or more <u>allowed annotations</u> from the knowledge base. It follows that Katz fails to disclose annotating the document with an <u>allowed annotation from the knowledge base</u> when the <u>user-proposed annotation matches the allowed annotation</u> from the knowledge base as recited in the claims.

The Examiner concedes that Katz fails to describe a first mode and a second mode as claimed. Office Action, p. 4, first full paragraph. However, the Examiner argues that Neal remedies the deficiencies of Katz. Specifically, the Examiner implies that Neal at col. 11, ll. 48-56 teaches "wherein the user need not consider any annotations when a single allowed annotation is automatically determined to match the user-proposed annotation, and when more than a single annotation is automatically determined to match the user-proposed annotation: (a) in a first mode, the user need only consider the matching allowed annotations and select one of the matching allowed

annotations; and (b) in a second mode, the user need not consider any annotations but rather one of the allowed annotations is automatically selected" as recited in the independent claims.

Neal is silent to the annotation modes recited in the independent claims. Neal at col. 11, ll. 48-56 discloses (emphasis added):

> The determination as to whether or not to automatically classify an item can be made using thresholds. The thresholds can be made configurable by a system manager depending upon the need for accuracy as balanced against the amount of operator interaction desired. In this approach, the confidence score at each search view is compare to a configurable threshold. If the score is above the threshold, then it is automatically classified. If it is below the threshold, then it is submitted to a user for human review and selection.

Automatically classifying an item when the confidence score is above the configurable threshold does not teach the recited limitations. Further, submitting to a user for human review and selection when the confidence score is below the configurable threshold does not teach the recited limitations. Applicants note that the claims recite specific limitations that are not evident in view of Neal's disclosure of thresholds. For instance, Neal's threshold technique does not teach that the user need not consider any annotations when a single allowed annotation is automatically determined to match the user-proposed annotation. Nor does Neal's threshold technique teach that when more than a single annotation is automatically determined to match the user-proposed annotation: (a) in a first mode, the user need only consider the matching allowed annotations and select one of the matching allowed annotations; and (b) in a second mode, the user need not consider any annotations but rather one of the allowed annotations is automatically selected. For at least these reasons, Katz and Neal fail to teach the limitations of independent claim 1.

In addition to the above, Applicants further assert that the Examiner has failed to establish a *prima facie* case of obviousness. In response to the Examiner's statement of obviousness at p. 4, second full paragraph of the Office Action, Applicants respectfully submit that these are conclusory statements of the sort rejected by both the Federal Circuit and the U.S. Supreme Court. See KSR v. Teleflex, 127 S.Ct. 1727, 1741, 82 U.S.P.Q.2d 1385, 1396 (U.S., April 30, 2007), quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained

by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). In contrast to the Examiner's argument, there has been no showing in the present § 103 rejection of objective evidence of record that one skilled in the art would combine Katz and Neal to produce the recited limitations. For example, Katz teaches techniques for generating and utilizing annotations to facilitate computer text retrieval. Further, Neal discloses automated classification of items using cascade searches. It would not be obvious to one of ordinary skill in the art to combine Katz and Neal to produce the recited techniques of determining an annotation for a document. Applicants further note that the Examiner is mischaracterizing Neal when he argues that Neal teaches modes, e.g., a first mode and a second mode, as recited in the claims.

For at least these reasons, it is believed that the combined teachings of Katz and Neal fail to meet the limitations of claim 1. Independent claims 16-18 include limitations similar to those of claim 1, and are therefore believed allowable for reasons similar to those described above with reference to claim 1. It follows that dependent claims 2-4, 6-11, and 19 are believed allowable due to their respective dependencies from independent claim 1. Further, one or more of these claims are believed to define separately patentable subject matter over the cited art.

For instance, dependent claim 3 recites the step of storing a user-proposed annotation/allowed annotation match, when a match is found. The Examiner argues that Neal discloses the limitations of claim 3 at FIG. 3, reference sign 51 (shown as "Updated Classification Knowledge Database"). Office Action, p. 5, sec. 9. Applicants disagree. Neal discloses that the updated classification knowledge database is created using words in a reference database. <u>See</u> Neal, col. 9, l. 66 to col. 10, l. 13. Neal teaches that the reference database consists of words which frequently describe particular items in a category. Neal does not disclose a user-proposed annotation/allowed annotation match. Neal at col. 9, ll. 38-48 states (emphasis added):

> [A] classification knowledge reference database 43 can be used as a source of information to determine which if any words to use in updating 45 the classification knowledge database. In one embodiment, the reference database has a list of each category. A list of all words encountered in descriptions of items in that category is associated with each category name, together with the number of items described by

each word. Accordingly, <u>if a word is used to describe most of the items in a category such as "ballpoint" then it can be used to update the classification knowledge database</u>.

Applicants respectfully submit that this fails to teach storing a <u>user-proposed annotation/allowed annotation match</u>, when a match is found. For at least these reasons, Neal does not teach the limitations of claim 3.

Next, dependent claim 4 is directed to notifying the user that the user-proposed annotation matches more than one allowed annotation, when more than one match is found. The Examiner refers to reference number 820 in FIG. 8 of Neal as disclosing the limitations of claim 4. Office Action, p. 5, sec. 10. Reference number 820 refers to an autoclassification configuration that "may appear as a hierarchical tree with multiple levels for the database, search type, and attributes." <u>See</u> Neal, col. 19, ll. 52-54. The autoclassification configuration of Neal is not the same as the limitation of notifying the user that the user-proposed annotation matches more than one allowed annotation, when more than one match is found. Accordingly, it is believed that the teachings of Neal fail to teach the limitations of claim 4.

Further, dependent claim 8 is directed to maintaining a history buffer of matches. Dependent claim 9 is directed to using the history buffer to update a set of allowed annotations. Dependent claim 10 is directed to using the history buffer to disambiguate matches. The Examiner refers to FIG. 3 of the Neal reference as disclosing the limitations of claims 8-10. <u>See</u> Office Action, p. 5, sec. 13. In describing FIG. 3, Neal states the following at col. 7, ll. 8-18 (emphasis added):

> Referring to FIG. 3, the formatted unclassified content 13 is first filtered 31 through a <u>stop list or excluded words database 19</u>. It is then processed against the automatic classification knowledge database 21 or any other knowledge base in order to assign it to a category 15. This classification process is discussed in more detail with respect to FIGS. 4 and 5. The result is the classified content 17 of FIG. 1.

> FIG. 3 shows how, in the process of classifying each item, the stop list 19 and the classification knowledge database 21 can be updated.

Illustrative embodiments of the invention allow for user entered terms to be stored together with their match in a history buffer, e.g., history memory 108. The history buffer may typically have limited

size and may store the most recent matches. This has at least two advantages. First, the buffer allows determining "hot" and "cold" terms of the allowed annotations A for optimization of A's content. "Hot" terms are terms that are used very often, while "cold" terms are terms that are used very rarely. Second, the buffer aids matching in case of ambiguities. See the present specification at p. 10, ll. 19-25. Thus, it is clear that the elements of FIG. 3 of Neal, i.e., excluded words database 19, are not the same as the claimed features of the recited claims. Accordingly, it is believed that the teachings of Neal fail to meet the limitations of claims 8-10.

For at least these reasons, Katz and Neal fail to render the recited claims obvious. Accordingly, Applicants respectfully request withdrawal of the § 103 rejection of claims 1-4, 6-11, and 16-19.

With regard to the § 103(a) rejection of claims 12-14, the Examiner looks to the Handschuh reference to supplement the deficiencies of Katz and Neal. Applicants respectfully assert that the combined teaching of Katz, Neal, and Handschuh fail to render claims 12-14 obvious. Applicants initially submit that Handschuh fails to remedy the deficient teachings of Katz and Neal as discussed above with regard to claim 1, from which claims 12-14 depend.

Claim 12 recites a knowledge base comprising at least one term graph. Claim 13 recites that the automatic determining step further comprises the steps of: determining a node in the at least one term graph that corresponds to the user-proposed annotation; determining at least one node in the at least one term graph that corresponds to the at least one allowed annotation; and computing a distance between the nodes. Claim 14 recites that the node determination comprises a stemming operation.

The Examiner argues that the diagram at the top of page 4 of the Handschuh reference teaches the limitations of claims 12 through 14. Office Action, p. 6, sec. 18. Although Handschuh discloses what appears to be a tree with terms, no where does Handschuh teach the limitations of determining a node in the at least one term graph that corresponds to the user-proposed annotation, determining at least one node in the at least one term graph that corresponds to the at least one allowed annotation, and computing a distance between the nodes as recited in claim 13. Further, no

where does Handschuh teach that node determination comprises a stemming operation as recited in claim 14.

Applicants further submit that the Examiner has failed to present a *prima facie* case of obviousness. In the Office Action, the Examiner states at p. 7, first full paragraph:

> Therefore it would have been obvious, to one of ordinary skill at the time the invention was made, to combine the annotation system of Katz and Neal with the term graph of Handschuh, in order to calculate the degree of separation between the user-proposed term and the allowed term, which would indicate to a system user the allowability of the proposed term.
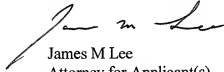
Applicants respectfully submit that this is a conclusory statement of the sort rejected by both the Federal Circuit and the U.S. Supreme Court. See KSR v. Teleflex, 127 S.Ct. 1727, 1741, 82 U.S.P.Q.2d 1385, 1396 (U.S., April 30, 2007), quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). There has been no showing in the present § 103(a) rejection of claims 12-14 of objective evidence of record that one of ordinary skill in the art would combine Katz, Neal, and Handschuh to produce the recited limitations. Katz teaches techniques for generating and utilizing annotations to facilitate computer text retrieval, Neal discloses the automated classification of items using cascade searches, and Handschuh discloses a framework that allows for the creation of metadata (see Handschuh, Abstract). A person of ordinary skill in the art would not combine the three cited references to produce the claimed limitations.

For at least these reasons, the combined teaching of Katz, Neal, and Handschuh fail to render claims 12-14 obvious. Accordingly, withdrawal of the § 103(a) rejection of claims 12-14 is respectfully requested.

In view of the foregoing, Applicants believe that claims 1-4, 6-14, and 16-19 are in condition for allowance and respectfully request withdrawal of the § 103 rejections.

Respectfully submitted,

Date: February 12, 2009

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